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LOGINID:sssptaul29pxo

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* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	NOV 21	CAS patent coverage to include exemplified prophetic substances identified in English-, French-, German-, and Japanese-language basic patents from 2004-present
NEWS 3	NOV 26	MARPAT enhanced with FSORT command
NEWS 4	NOV 26	CHEMSAFE now available on STN Easy
NEWS 5	NOV 26	Two new SET commands increase convenience of STN searching
NEWS 6	DEC 01	ChemPort single article sales feature unavailable
NEWS 7	DEC 12	GBFULL now offers single source for full-text coverage of complete UK patent families
NEWS 8	DEC 17	Fifty-one pharmaceutical ingredients added to PS
NEWS 9	JAN 06	The retention policy for unread STNmail messages will change in 2009 for STN-Columbus and STN-Tokyo
NEWS 10	JAN 07	WPIDS, WPINDEX, and WPIX enhanced Japanese Patent Classification Data
NEWS 11	FEB 02	Simultaneous left and right truncation (SLART) added for CERAB, COMPUAB, ELCOM, and SOLIDSTATE
NEWS 12	FEB 02	GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS 13	FEB 06	Patent sequence location (PSL) data added to USGENE
NEWS 14	FEB 10	COMPENDEX reloaded and enhanced
NEWS 15	FEB 11	WTEXTILES reloaded and enhanced

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 08:25:23 ON 17 FEB 2009

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=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.22       0.22

FILE 'REGISTRY' ENTERED AT 08:25:33 ON 17 FEB 2009
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STRUCTURE FILE UPDATES:   16 FEB 2009  HIGHEST RN 1107125-97-2
DICTIONARY FILE UPDATES:  16 FEB 2009  HIGHEST RN 1107125-97-2

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TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

  Please note that search-term pricing does apply when
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REGISTRY includes numerically searchable data for experimental and
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experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10720702a.str

L1      STRUCTURE UPLOADED

=> ld l1
LD IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d l1
L1 HAS NO ANSWERS
L1                STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=>
Uploading C:\Program Files\Stnexp\Queries\10720702.str

L2      STRUCTURE UPLOADED

=> s l1
SAMPLE SEARCH INITIATED 08:27:11 FILE 'REGISTRY'
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SAMPLE SCREEN SEARCH COMPLETED -     1057 TO ITERATE

100.0% PROCESSED     1057 ITERATIONS                                 2 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        19190 TO    23090
PROJECTED ANSWERS:               2 TO      124

L3            2 SEA SSS SAM L1

=> search l2
ENTER TYPE OF SEARCH (SSS), CSS, FAMILY, OR EXACT:.
ENTER SCOPE OF SEARCH (SAMPLE), FULL, RANGE, OR SUBSET:.
SAMPLE SEARCH INITIATED 08:27:35 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     2497 TO ITERATE

 80.1% PROCESSED     2000 ITERATIONS                                 5 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        46943 TO    52937
PROJECTED ANSWERS:               5 TO      273

L4            5 SEA SSS SAM L2

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ENTER SCOPE OF SEARCH (SAMPLE), FULL, RANGE, OR SUBSET:full
FULL SEARCH INITIATED 08:27:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    21651 TO ITERATE

100.0% PROCESSED    21651 ITERATIONS                                78 ANSWERS
SEARCH TIME: 00.00.01

L5           78 SEA SSS FUL L1

=> search l2
ENTER TYPE OF SEARCH (SSS), CSS, FAMILY, OR EXACT:.
ENTER SCOPE OF SEARCH (SAMPLE), FULL, RANGE, OR SUBSET:full
FULL SEARCH INITIATED 08:27:52 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    49956 TO ITERATE

100.0% PROCESSED    49956 ITERATIONS                               108 ANSWERS
SEARCH TIME: 00.00.01

L6          108 SEA SSS FUL L2

=> s l6 not l5
L7           30 L6 NOT L5

=> file caplus
COST IN U.S. DOLLARS                        SINCE FILE      TOTAL
                                               ENTRY    SESSION
FULL ESTIMATED COST                            372.72     372.94
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FILE 'CAPLUS' ENTERED AT 08:28:14 ON 17 FEB 2009
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FILE COVERS 1907 - 17 Feb 2009 VOL 150 ISS 8
FILE LAST UPDATED: 16 Feb 2009 (20090216/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l30
L30 NOT FOUND
The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s 17
L8 10 L7

=> d l8 fbib ab hitstr 1-10

L8 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2003:16686 CAPLUS
DN 138:205004
TI Substituted Pyrazolopyridopyridazines as Orally Bioavailable Potent and Selective PDE5 Inhibitors: Potential Agents for Treatment of Erectile Dysfunction
AU Yu, Guixue; Mason, Helen; Wu, Ximao; Wang, Jian; Chong, Saeho; Beyer, Bruce; Henwood, Andrew; Pongrac, Ronald; Seliger, Laurie; He, Bin; Normandin, Diane; Ferrer, Pam; Zhang, Rongan; Adam, Leonard; Humphrey, William G.; Krupinski, John; Macor, John E.
CS Discovery Chemistry, Drug Metabolism and Pharmacokinetics, Princeton, NJ, 08543-5400, USA
SO Journal of Medicinal Chemistry (2003), 46(4), 457-460
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English

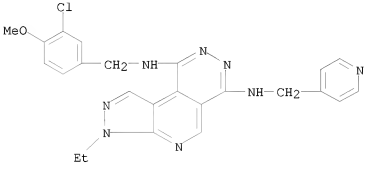
OS CASREACT 138:205004

AB Novel pyrazolopyridopyridazines, e.g. I, have been prepared as potent and selective PDE5 inhibitors. I has been identified as a more potent and selective PDE5 inhibitor than sildenafil. It is as efficacious as sildenafil in in vitro and in vivo PDE5 inhibition models, and it is orally bioavailable in rats and dogs. The superior isoenzyme selectivity of I is expected to exert less adverse effects in humans when used for erectile dysfunction treatment.

IT 296248-82-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of substituted pyrazolopyridopyridazines as orally bioavailable selective PDE5 inhibitors for treatment of erectile dysfunction)

RN 296248-82-3 CAPLUS

CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-(4-pyridinylmethyl)- (CA INDEX NAME)



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2000:688225 CAPLUS

DN 133:252445

TI Preparation of fused pyridopyridazine inhibitors of cGMP phosphodiesterase

IN Yu, Guixue; Macor, John; Chung, Hyei-jha; Humora, Michael; Katipally, Kishta; Wang, Yizhe; Kim, Soojin

PA Bristol-Myers Squibb Company, USA

SO PCT Int. Appl., 137 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000056719	A1	20000928	WO 2000-US6100	20000309
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	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,				

CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

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				US 1999-148009P	P	19990810
CA 2368023	A1	20000928		CA 2000-2368023		20000309
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				WO 2000-US6100	W	20000309
EP 1165521	A1	20020102		EP 2000-916180		20000309
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				US 1999-148009P	P	19990810
				WO 2000-US6100	W	20000309
CN 1161341	C	20040811		CN 2000-805376		20000309
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				US 1999-148009P	P	19990810
US 6316438	B1	20011113		US 2000-526162		20000315
				US 1999-125488P	P	19990322
				US 1999-148009P	P	19990810

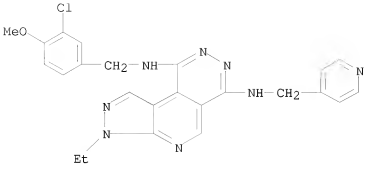
OS MARPAT 133:252445

AB The title compds. [I; Y = N, CR5; Z = N, CR6 (provided that at least one of Y and Z = N); R1, R2 = H, halo, SR7, etc.; R3 = H, alkyl, arylalkyl; R4 = H, halo, alkyl, etc.; R5, R6 = H, halo, alkyl; R7 = H, alkyl, cycloalkyl, etc.] and their pharmaceutically acceptable salts, inhibitors of cGMP PDE, especially type 5, useful in treating cardiovascular and sexual disorders, were prepared E.g., a multi-step synthesis of I [Y = N; Z = CH; R1 = 4-hydroxypiperidin-1-yl; R2 = (3-Cl-4-MeOC6H3)CH2NH; R3 = Et; R4 = H] was given. Compds. I are effective at 0.05-100 mg/kg/day.

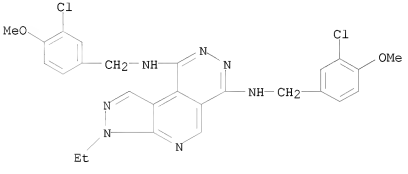
IT 296248-82-3P 296248-95-8P 296249-08-6P
296249-10-0P 296249-11-1P 296249-30-4P
296249-33-7P 296249-43-9P 296249-44-0P
296249-48-4P 296249-59-7P 296249-62-2P
296249-68-8P 296249-79-1P 296249-80-4P
296249-84-8P 296249-85-9P 296249-87-1P
296250-40-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of fused pyridopyridazine inhibitors of cGMP phosphodiesterase)

RN 296248-82-3 CAPLUS

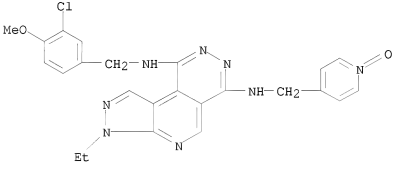
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-(4-pyridinylmethyl)- (CA INDEX NAME)



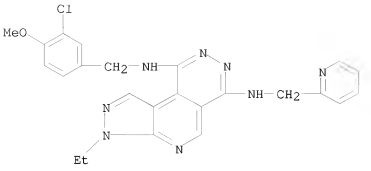
RN 296248-95-8 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N6,N9-bis[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl- (CA INDEX NAME)



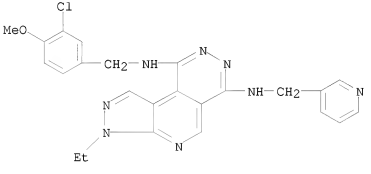
RN 296249-08-6 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[(1-oxido-4-pyridinyl)methyl]- (CA INDEX NAME)



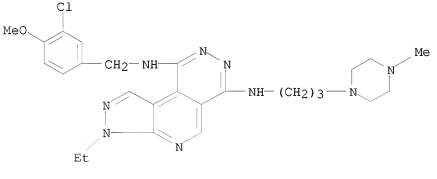
RN 296249-10-0 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-(2-pyridinylmethyl)- (CA INDEX NAME)



RN 296249-11-1 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-(3-pyridinylmethyl)- (CA INDEX NAME)

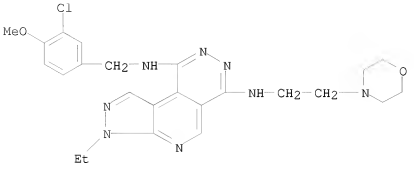


RN 296249-30-4 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[3-(4-methyl-1-piperazinyl)propyl]- (CA INDEX NAME)

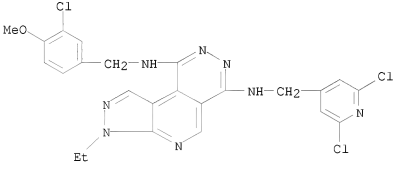


RN 296249-33-7 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[2-(4-morpholinyl)ethyl]-

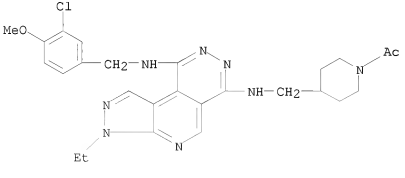
(CA INDEX NAME)



RN 296249-43-9 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-N6-[(2,6-dichloro-4-pyridinyl)methyl]-3-ethyl- (CA INDEX NAME)

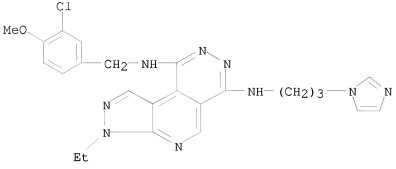


RN 296249-44-0 CAPLUS
CN Ethanone, 1-[4-[[[9-[[(3-chloro-4-methoxyphenyl)methyl]amino]-3-ethyl-3H-pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazin-6-yl]amino]methyl]-1-piperidinyl]- (CA INDEX NAME)

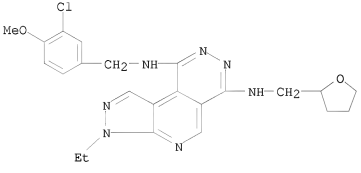


RN 296249-48-4 CAPLUS

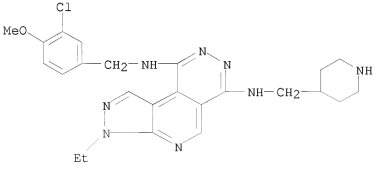
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[3-(1H-imidazol-1-yl)propyl]- (CA INDEX NAME)



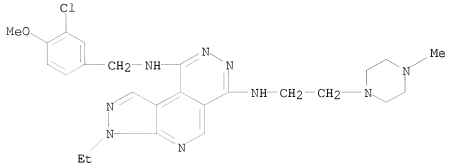
RN 296249-59-7 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[(tetrahydro-2-furanyl)methyl]- (CA INDEX NAME)



RN 296249-62-2 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-(4-piperidinylmethyl)- (CA INDEX NAME)

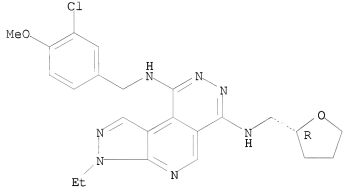


RN 296249-68-8 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[2-(4-methyl-1-piperazinyl)ethyl]- (CA INDEX NAME)



RN 296249-79-1 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[[(2R)-tetrahydro-2-furanyl]methyl]- (CA INDEX NAME)

Absolute stereochemistry.



RN 296249-80-4 CAPLUS
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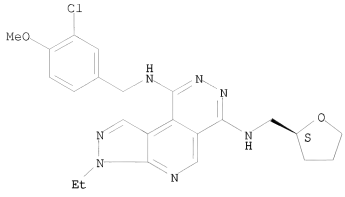
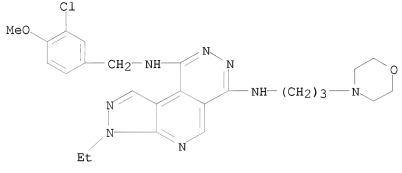
Absolute stereochemistry.



RN 296249-84-8 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine,
N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[3-(4-morpholinyl)propyl]-
(CA INDEX NAME)



RN 296249-85-9 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine,
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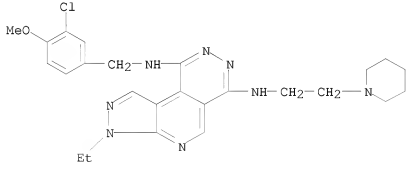
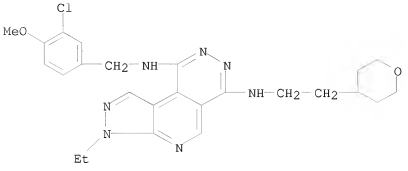
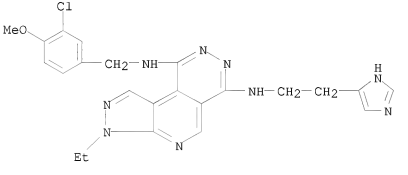


RN 296249-87-1 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine,
N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[2-(tetrahydro-2H-pyran-4-

yl)ethyl]- (CA INDEX NAME)



RN 296250-40-3 CAPLUS
CN 3H-Pyrazolo[4',3':5,6]pyrido[3,4-d]pyridazine-6,9-diamine, N9-[(3-chloro-4-methoxyphenyl)methyl]-3-ethyl-N6-[2-(1H-imidazol-5-yl)ethyl]- (CA INDEX NAME)



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

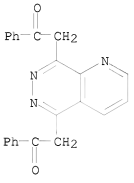
L8 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1983:612481 CAPLUS
DN 99:212481
OREF 99:32699a,32702a
TI Condensed pyridazines. I. Reaction of 5,8-dichloropyrido[2,3-d]pyridazine with carbanion
AU Oishi, Etsuo; Watanabe, Hiromi; Hayashi, Eisaku
CS Shizuoka Coll. Pharm., Shizuoka, 422, Japan
SO Yakugaku Zasshi (1983), 103(6), 623-30
CODEN: YKKZAJ; ISSN: 0031-6903
DT Journal
LA Japanese
OS CASREACT 99:212481
AB Reaction of the title compound I (R = R1 = Cl) (II) with EtO2CCH2CN, MeCOCH2CO2Et, CH2(CO2Et)2, CH2(CN)2, and PhCH2CN in C6H6 in the presence of NaNH2 gave I [R = EtO2CCHCN, CH(CN)2; R1 = Cl] and I [R = Cl; R1 = EtO2CCHCN, CH2CO2Et, CH(CO2Et)2, PhCHCN]. II reacted with MeCOPh and EtCOPh in PhMe in the presence of NaH to give I (R = R1 = CH2COPh; R = Cl,

R1 = CH2COPh; R = Cl, R1 = CHMeCOPh).

IT 87950-34-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 87950-34-3 CAPLUS

CN Ethanone, 2,2'-pyrido[2,3-d]pyridazine-5,8-diylbis[1-phenyl- (9CI) (CA INDEX NAME)



L8 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1976:586482 CAPLUS

DN 85:186482

OREF 85:29744h,29745a

TI Structure-activity relations of the diuretic activity of triaza- and tetraazanaphthalene compounds

AU Nishikawa, Kohei; Shimakawa, Hisao; Inada, Yoshiyuki; Shibouta, Yumiko; Kikuchi, Shintaro; Yurugi, Shojiro; Oka, Yoshikazu

CS Cent. Res. Div., Takeda Chem. Ind., Ltd., Osaka, Japan

SO Chemical & Pharmaceutical Bulletin (1976), 24(9), 2057-77
CODEN: CPBTAL; ISSN: 0009-2363

DT Journal

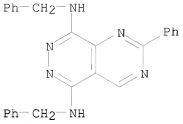
LA English

AB The diuretic activity of 219 nitrogen containing heterocyclic compds., classified into 13 groups based on the structural features, was studied in saline loaded rats. Of the compds. studied, 104 were active at oral doses of 10-30 mg/kg. Several of the pyrimidopyridazines, pyridazinopyridazines and pyridopyridazines produced as potent diuresis and natriuresis as hydrochlorothiazide [58-93-5] at the oral dose of 0.1 mg/kg; DS 210 (I) [33222-18-3] and DS 511 (II) [39632-88-7] were selected for more extensive evaluation as diuretic agents. Structure-activity relations of the tested compds. are discussed.

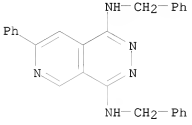
IT 33222-21-8 39632-89-8 61098-88-2
RL: BIOL (Biological study)
(diuretic)

RN 33222-21-8 CAPLUS

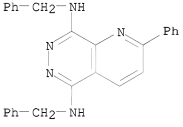
CN Pyrimido[4,5-d]pyridazine-5,8-diamine, 2-phenyl-N5,N8-bis(phenylmethyl)- (CA INDEX NAME)



RN 39632-89-8 CAPLUS
CN Pyrido[3,4-d]pyridazine-1,4-diamine, 7-phenyl-N1,N4-bis(phenylmethyl)-
(CA INDEX NAME)



RN 61098-88-2 CAPLUS
CN Pyrido[2,3-d]pyridazine-5,8-diamine, 2-phenyl-N5,N8-bis(phenylmethyl)-
(CA INDEX NAME)



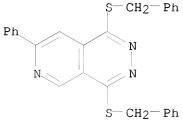
L8 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1976:17256 CAPLUS
DN 84:17256
OREF 84:2855a,2858a
TI Syntheses of N-heterocyclic compounds. XXV. Syntheses of pyrido[3,4-d]pyridazine derivatives. 2
AU Oka, Yoshikazu; Omura, Kiyoshi; Miyake, Akio; Itoh, Katsumi; Tomimoto, Mitsumi; Tada, Norio; Yurugi, Shojiro
CS Med. Res. Lab., Takeda Chem. Ind., Ltd., Osaka, Japan
SO Chemical & Pharmaceutical Bulletin (1975), 23(10), 2239-50
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
OS CASREACT 84:17256

AB Twenty-nine derivs. of the potent diuretic 1,4-dimorpholino-7-phenylpyrido[3,4-d]pyridazine, e.g., I (R = Ph, Me-, Cl-, O2N-, and MeOC6H4, xylyl, 2-furyl, 2-pyridyl, 1-, 2-naphthyl; R1 = H, Me, PhCH2; R2 = morpholino, piperidino, pyrrolidino), were prepared In 1,4-dichloropyrido[3,4-d]pyridazine the 4-chloro group was more reactive toward nucleophilic substitution than the 1-chloro group. Some reaction of I, e.g. acid hydrolysis, reduction and Grignard addition reaction were also carried out. Significance of the ring N at the 6-position in I for diuretic activity is discussed.

IT 57961-44-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 57961-44-1 CAPLUS

CN Pyrido[3,4-d]pyridazine, 7-phenyl-1,4-bis[(phenylmethyl)thio]- (CA INDEX NAME)



L8 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1973:58358 CAPLUS

DN 78:58358

OREF 78:9259a,9262a

TI Syntheses of N-heterocyclic compounds. IX. Reduction of 2-aryl-5,8-disubstituted pyrimido[4,5-d]pyridazine

AU Yurugi, Shojiro; Fushimi, Tomiyoshi; Hieda, Masaru

CS Res. Dev. Div., Takeda Chem. Ind., Ltd., Osaka, Japan

SO Yakugaku Zasshi (1972), 92(11), 1316-21
CODEN: YKKZAJ; ISSN: 0031-6903

DT Journal

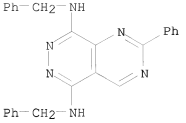
LA Japanese

AB Reduction of 2-aryl-5,8-disubstituted pyrimido[4,5-d]pyridazine ((I) (R = iso-PrNH, PhNH, PhCH2NH, piperidino, morpholino, etc.; R1 = Ph, m-tolyl, p-ClC6H4, 2-thienyl, 5-morpholino-2-furyl)) to 2-aryl-3,4-dihydro-5,8-disubstituted-pyrimido[4,5-d]pyridazine (II) was carried out with NaBH4, LiAlH4, sodium isopentoxide, and a catalyst. Acylation of II gave 2-aryl-3-acyl-3,4-dihydro-5,8-dimorpholinopyrimido[4,5-d]pyridazine and alkylation of II gave 2-aryl-3-alkyl-3,4-dihydro-5,8-dimorpholinopyrimido[4,5-d]pyridazine. 2-Aryl-5,8-disubstituted-3,4-dihydropyrimido-[4,5-d]pyridazines showed a strong diuretic activity.

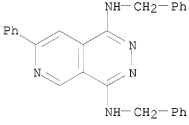
IT 33222-21-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of)

RN 33222-21-8 CAPLUS

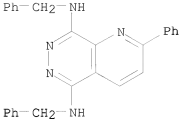
CN Pyrimido[4,5-d]pyridazine-5,8-diamine, 2-phenyl-N5,N8-bis(phenylmethyl)- (CA INDEX NAME)



L8 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1973:43400 CAPLUS
DN 78:43400
OREF 78:6863a,6866a
TI Syntheses of N-heterocyclic compounds. XII. Syntheses of pyrido[3,4-d]pyridazine and pyrido[2,3-d]pyridazine derivatives
AU Yurugi, Shojiro; Fushimi, Tomiyoshi; Sugihara, Hirosada; Hieda, Masaru
CS Res. Dev. Div., Takeda Chem. Ind., Ltd., Osaka, Japan
SO Yakugaku Zasshi (1972), 92(11), 1333-8
CODEN: YKKZAJ; ISSN: 0031-6903
DT Journal
LA Japanese
AB 1,2,3,4-Tetrahydro-7-phenylpyrido[3,4-d]pyridazine-1,4-dione (I) and 2-phenyl-5,6,7,8-tetrahydropyrido[2,3-d]pyridazine-5,8-dione (II) were converted to the corresponding dichlorides, which reacted with amines to give 1,4-bis(substituted amino)-7-phenylpyrido[3,4-d]pyridazines and 2-phenyl-5,8-bis-(substituted amino)pyrido[2,3-d]pyridazines. 1,4-Dimorpholino-7-phenylpyrido[3,4-d]pyridazine and 2-phenyl-5,8-bis(isopropylamino)pyrido[2,3-d]pyridazine were diuretics.
IT 39632-89-8P 39632-90-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 39632-89-8 CAPLUS
CN Pyrido[3,4-d]pyridazine-1,4-diamine, 7-phenyl-N1,N4-bis(phenylmethyl)- (CA INDEX NAME)

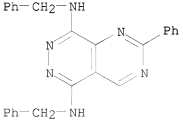


RN 39632-90-1 CAPLUS
CN Pyrido[2,3-d]pyridazine-5,8-diamine, 2-phenyl-N5,N8-bis(phenylmethyl)-, hydrochloride (1:1) (CA INDEX NAME)

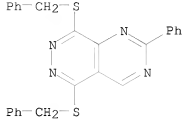


● HCl

L8 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1972:514340 CAPLUS
DN 77:114340
OREF 77:18841a,18844a
TI Synthesis of N-heterocyclic compounds. VII. 2-Aryl-5,8-disubstituted pyrimido[4,5-d]pyridazine
AU Yurugi, Shojiro; Hieda, Masaru; Fushimi, Tomiyoshi; Kawamatsu, Yutaka; Suginara, Hirosada; Tomimoto, Mitsumi
CS Res. Dev. Div., Takeda Chem. Ind., Ltd., Osaka, Japan
SO Chemical & Pharmaceutical Bulletin (1972), 20(7), 1528-35
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
AB When 2-aryl-5,8-dichloropyrimido[4,5-d]pyridazine (I, R = R1 = Cl) was reacted with nucleophiles, such as amines, sodium methoxide, sodium azide, sodium sulfide etc., 5,8-disubstituted I (R = R1 = PrNH, MeS, morpholino, etc. Ar = Ph, MeC6H4, 2-pyridyl, etc.) were obtained. treatment of 2-phenyl-5-chloro-8-morpholinopyrimido-[4,5-d]pyridazine or 2-phenyl-5-morpholino-8-chloropyrimido-[4,5-d]pyridazine with nucleophiles gave I (R = R1). The phenyl group at the 2-position accelerated the substitution at position 5 and 8. The reaction of 2-phenyl-5,8-bis(substituted thio)pyrimido[4,5-d]pyridazine with Cl gave I (R = R1 = Cl, Ar = Ph). Several compds. showed diuretic activity.
IT 33222-21-8P 38277-18-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 33222-21-8 CAPLUS
CN Pyrimido[4,5-d]pyridazine-5,8-diamine, 2-phenyl-N5,N8-bis(phenylmethyl)- (CA INDEX NAME)



RN 38277-18-8 CAPLUS
CN Pyrimido[4,5-d]pyridazine, 2-phenyl-5,8-bis[(phenylmethyl)thio]- (CA INDEX NAME)



L8 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1971:476832 CAPLUS
DN 75:76832
OREF 75:12171a,12174a
TI Pyrimido[4,5-d]pyridazine derivatives
IN Yurugi, Shojiro; Kikuchi, Shintaro
PA Takeda Chemical Industries, Ltd.
SO Ger. Offen., 33 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PI DE 2046577	A	19710506	DE 1970-2046577		19700922
			JP 1969-76125	A	19690924
			JP 1970-54984	A	19700624
JP 48011116	B	19730410	JP 1970-54984		19700624
NL 7014065	A	19710326	NL 1970-14065		19700923
			JP 1969-76125	A	19690924
			JP 1970-54984	A	19700624
FR 2070085	A5	19710910	FR 1970-34490		19700923
FR 2070085	B1	19750606			
			JP 1969-76125	A	19690924
SE 363831	B	19740204	SE 1970-12956		19700923
			JP 1969-76125	A	19690924
			JP 1970-54984	A	19700624
HU 164522	B	19740228	HU 1970-TA1090		19700923
			JP 1969-76125	A	19690924
			JP 1970-54984	A	19700624
NO 129907	B	19740610	NO 1970-3617		19700923
			JP 1969-76125	A	19690924
			JP 1970-54984	A	19700624
PL 81368	B1	19750830	PL 1970-143378		19700923
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				JP 1970-54984	A	19700624
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	CH 547298	A	19740329	CH 1970-14165		19700924
				JP 1969-76125	A	19690924
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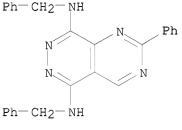
				JP 1970-54984	A	19700624
	FR 2108518	A5	19720519	FR 1971-34438		19710924
				AT 1970-8633	A	19700924

AB The diuretic title compds. (I) were prepared in a five-step reaction. Thus, benzamidine hydrochloride and [(ethylethoxy)methylene]oxalacetate were condensed in MeOH with MeONa to give 2-phenyl-4,5-bis(ethoxycarbonyl)pyrimidine, which was refluxed with NH2NH2.-H2O in MeOH to give I (R1 = Ph, R2 = ONH2NH3, R3 = OH) (II). II in aqueous HCl was stirred at room temperature to give I (R1 = Ph, R2 = R3 = OH) (III). A mixture of III, POCl3, and PCl5 was heated 3 hr to give I (R1 = Ph, R2 = R3 = Cl), was heated with morpholine for 3 hr at 80-5° to give I (R1 = Ph, R2 = R3 = morpholino). Similarly prepared were .apprx.15 more I (R2 = R3 = aminosubstituted) and their corresponding intermediates.

IT 33222-21-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 33222-21-8 CAPLUS

CN Pyrimido[4,5-d]pyridazine-5,8-diamine, 2-phenyl-N5,N8-bis(phenylmethyl)- (CA INDEX NAME)



L8 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1967:37890 CAPLUS

DN 66:37890

OREF 66:7227a,7230a

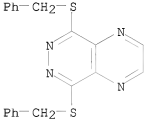
TI The synthesis of pyrazino[2,3-d]pyridazine and some of its derivatives

AU Patel, Natubhai R.; Castle, Raymond N.

CS Univ. of New Mexico, Albuquerque, NM, USA

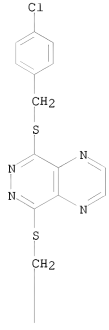
SO Journal of Heterocyclic Chemistry (1966), 3(4), 512-17
CODEN: JHTCAD; ISSN: 0022-152X

DT Journal
LA English
AB Pyrazino[2,3-d]pyridazine (I) was synthesized by two different routes. 5,8-Dihydroxypyrazino-[2,3-d]pyridazine was converted to 5,8-Dihydroxypyrazino-[2,3-d]pyridazine (II) and 5,8-dibromopyrazino[2,3-d]pyridazine. When II was treated with various benzyl mercaptans and alk-oxides the corresponding disubstituted drivs. were obtained. II when allowed to react with aromatic amines gave 5,8-diaminopyrazino[2,3-d]pyridazines; however, with aliphatic amines only mono-substituted products were obtained substituted in the 8-position. The reaction of pyrazine-2,3-dinitrile with hydrazine gave 5,8-diaminopyrazino[2,3-d]pyridazine.
IT 13480-47-2P 13480-48-3P 13480-49-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 13480-47-2 CAPLUS
CN Pyrazino[2,3-d]pyridazine, 5,8-bis[(phenylmethyl)thio]- (CA INDEX NAME)

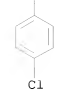


RN 13480-48-3 CAPLUS
CN Pyrazino[2,3-d]pyridazine, 5,8-bis[[(4-chlorophenyl)methyl]thio]- (CA INDEX NAME)

PAGE 1-A

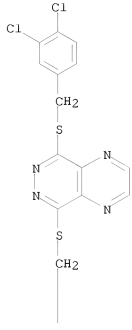


PAGE 2-A

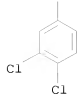


RN 13480-49-4 CAPLUS
CN Pyrazino[2,3-d]pyridazine, 5,8-bis[[(3,4-dichlorophenyl)methyl]thio]- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



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